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NEWS 18	JAN 26	Updated MeSH vocabulary, new structured abstracts, and other enhancements improve searching in STN reload of MEDLINE
NEWS 19	JAN 28	CABA will be updated weekly
NEWS 20	FEB 23	PCTFULL file on STN completely reloaded
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=> s langerhans
L1          64 LANGERHANS

=> s l1 and islet
          1778 ISLET
            16 ISLETS
          1794 ISLET
                (ISLET OR ISLETS)
L2          58 L1 AND ISLET

=> s islet of langerhans
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          1778 ISLET
            16 ISLETS
          1794 ISLET
                (ISLET OR ISLETS)
        151945 OF
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            23 OFS
        151968 OF
                 (OF OR OFS)
            64 LANGERHANS
L3          58 ISLET OF LANGERHANS
                 (ISLET(W)OF(W)LANGERHANS)

=> s heparin
L4        1552 HEPARIN

=> fil caplus
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FULL ESTIMATED COST                                     34.71      34.94

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FILE COVERS 1907 - 3 Mar 2011  VOL 154 ISS 10
FILE LAST UPDATED: 2 Mar 2011  (20110302/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Oct 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Oct 2010

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reclassification data for the fourth quarter of 2010.

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=> s l3 and l4
            45 L3
        113994 L4
L5           4 L3 AND L4

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6           4 DUP REM L5 (0 DUPLICATES REMOVED)

=> d l6 1-4 ibib abs

L6   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER:         2003:177125  CAPLUS
DOCUMENT NUMBER:          138:216597
TITLE:                    Differentially expressed nucleic acids and their
                          encoded proteins associated with pain and their use in
```

screening for regulatory agents
INVENTOR(S): Woolf, Clifford; D'Urso, Donatella; Befort, Katia; Costigan, Michael
PATENT ASSIGNEE(S): The General Hospital Corporation, USA; Bayer AG
SOURCE: PCT Int. Appl., 1017 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016475	A2	20030227	WO 2002-XF25765	20020814
WO 2003016475	A3	20040910		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2003016475	A2	20030227	WO 2002-US25765	20020814
WO 2003016475	A3	20040910		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:	US 2001-312147P	P 20010814
	US 2001-346382P	P 20011101
	US 2001-333347P	P 20011126
	WO 2002-US25765	20020814

AB The present invention relates to human and rat nucleic acid sequences which are related to pain and which are differentially expressed during pain. The nucleic acids are differentially expressed by at least ±1.4-fold in any or all of the following conditions using the Affymetrix human U95, murine U74 and rat U34 GeneChip arrays: axotomy, spared nerve injury, chronic construction, spinal segmental nerve lesion, and inflammatory pain models. The invention further relates to methods of identifying nucleic acid sequences which are differentially expressed during pain, microarrays comprising such differentially expressed sequences, and methods of screening agents for the ability to regulate the expression of such differentially expressed sequences. [This abstract record is one of seven records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2003:266864 CAPLUS
DOCUMENT NUMBER: 138:282467
TITLE: Unique low homology gene region sequences and use in DNA chips
INVENTOR(S): Daimon, Hisashi; Oura, Tomonori; Rokushima, Masatomo;

Oba, Toshiharu; Mineno, Junichi; Asada, Kiyozo; Kato, Ikunoshin
PATENT ASSIGNEE(S): Takara Bio Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 147 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2003102478	A	20030408	JP 2002-89393		20020327
PRIORITY APPLN. INFO.:			JP 2001-99258	A	20010330
			JP 2001-185510	A	20010619
			JP 2001-225152	A	20010725

AB Unique nucleotide sequences of gene regions of low homol. and immobilized products are disclosed. They are useful in constructing DNA chips with min. crosshybridization. Human cytokine-related genes, Escherichia coli genes, human cancer-associated genes, and rat toxicol. related genes are provided.

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2002:736423 CAPLUS
DOCUMENT NUMBER: 137:274009
TITLE: Cell-specific gene expression profiles and algorithms for their construction and their uses for determining the phenotype of cells and distinguishing cell lines
INVENTOR(S): Wan, Jackson; Wang, Yixin
PATENT ASSIGNEE(S): Ortho-Clinical Diagnostics, Inc., USA
SOURCE: PCT Int. Appl., 850 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2002074979	A2	20020926	WO 2002-US8456		20020320
WO 2002074979	A3	20030313			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002306768	A1	20021003	AU 2002-306768		20020320
US 20030148295	A1	20030807	US 2002-101510		20020320
EP 1370696	A2	20031217	EP 2002-753663		20020320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2004519247	T	20040702	JP 2002-574368		20020320
PRIORITY APPLN. INFO.:			US 2001-276947P	P	20010320
			WO 2002-US8456	W	20020320

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The present invention relates to gene expression profiles, algorithms to generate gene expression profiles, microarrays comprising nucleic acid sequences representing gene expression profiles, methods of using gene

expression profiles and microarrays, and business methods directed to the use of gene expression profiles, microarrays, and algorithms. By integrating laser capture microdissection, RNA amplification, and cDNA microarray technol., diverse cell types obtained in situ may be successfully screened and subsequently identified by differential gene expression. To demonstrate this integration of technologies, the differential gene expressions of large and small-sized neurons in the dorsal root ganglia of rats were examined, and 477 cDNAs identified with 1.5-fold or greater differences. The gene expression data is transformed into a log-ratio value, and the genes with weak differential values are filtered from the data; the gene expression profiles are then extracted using the MaxCor or Mean Log Ratio algorithms of the present invention. For an unknown sample, it may be necessary to transform the gene expression data of the sample prior to scoring against the expression profiles. Gene expression profiles were thus collected from a set of human primary cells via DNA microarray technol. Cluster anal. of 803 nucleic acid sequences confirmed that the samples could be classified into 3 groups: endothelial, epithelial, and muscle cell.

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 1999:390430 CAPLUS

DOCUMENT NUMBER: 131:57770

TITLE: Method and composition to enhance the efficacy of a vaccine using chemokines

INVENTOR(S): Gallo, Robert C.; Devico, Anthony L.; Garzino-Demo, Alfredo

PATENT ASSIGNEE(S): University of Maryland Biotechnology Institute, USA

SOURCE: PCT Int. Appl., 134 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9929728	A1	19990617	WO 1998-US26291	19981211
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2314006	A1	19990617	CA 1998-2314006	19981211
AU 9918158	A	19990628	AU 1999-18158	19981211
EP 1037918	A1	20000927	EP 1998-963052	19981211
EP 1037918	B1	20090304		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 424217	T	20090315	AT 1998-963052	19981211
US 20080112976	A1	20080515	US 2006-458555	20060719
US 7708983	B2	20100504		

PRIORITY APPLN. INFO.:		
US 1997-69281P	P	19971211
WO 1998-US26291	W	19981211
US 2000-591992	A3	20000612
US 2003-445790	A1	20030527

US 2005-72798 A2 20050304
US 2005-700690P P 20050719
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The present invention relates to a method to enhance the efficacy of a vaccine in a subject treated with the vaccine comprising administering to the subject in combination with the vaccine a one or more chemokines. The present invention also relates to compns. of vaccines containing chemokines. The chemokines are selected from group consisting of CC, CXC, C-C and CX3C chemokine, e.g. macrophage-derived chemokine, MCP-1, MCP-2, MCP-3, MCP-4, activated macrophage-specific chemokine, macrophage inflammatory protein 1 (α, β, γ, and δ) and 2 and 3 (α and β), and others.
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FULL ESTIMATED COST 13.32 48.26

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CA SUBSCRIBER PRICE -3.48 -3.48

FILE 'MEDLINE' ENTERED AT 14:32:55 ON 03 MAR 2011

FILE 'EMBASE' ENTERED AT 14:32:55 ON 03 MAR 2011

FILE 'BIOSIS' ENTERED AT 14:32:55 ON 03 MAR 2011

=> s islet of langerhans
2 FILES SEARCHED...
L7 44982 ISLET OF LANGERHANS

=> s l7 and heparin
L8 135 L7 AND HEPARIN

=> s l8 and coat?
L9 20 L8 AND COAT?

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10 12 DUP REM L9 (8 DUPLICATES REMOVED)

=> d l10 1-12 ibib abs

L10 ANSWER 1 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2010141676 MEDLINE
DOCUMENT NUMBER: PubMed ID: 20021270
TITLE: Anchoring of vascular endothelial growth factor to surface-immobilized heparin on pancreatic islets: implications for stimulating islet angiogenesis.
AUTHOR: Cabric Sanja; Sanchez Javier; Johansson Ulrika; Larsson Rolf; Nilsson Bo; Korsgren Olle; Magnusson Peetra U
CORPORATE SOURCE: Division of Clinical Immunology, Department of Oncology, Radiology, and Clinical Immunology, Uppsala University, Uppsala, Sweden.

CONTRACT NUMBER: U01AI065192 (United States NIAID NIH HHS)
SOURCE: Tissue engineering. Part A, (2010 Mar) Vol. 16, No. 3, pp. 961-70.
Journal code: 101466659. E-ISSN: 1937-335X. L-ISSN: 1937-3341.
Report No.: NLM-PMC2862613 [Available on 03/01/11].
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 201006
ENTRY DATE: Entered STN: 2 Mar 2010
Last Updated on STN: 3 Jun 2010
Entered Medline: 2 Jun 2010

AB In pancreatic islet transplantation, early revascularization is necessary for long-term graft function. We have shown in in vitro and in vivo models that modification with surface-attached heparin protects the islets from acute attack by the innate immune system of the blood following intraportal islet transplantation. In this study, we have investigated the ability of an immobilized conjugate composed of heparin to bind the angiogenic growth factor vascular endothelial growth factor-A (VEGF-A) as a means of attracting endothelial cells (ECs) to induce angiogenesis and revascularization. We analyzed the capacity of VEGF-A to bind to immobilized heparin and how this affected the proliferation and adherence of ECs to both artificial glass surfaces and islets. Quartz crystal microbalance with dissipation monitoring and slot-blot demonstrated the binding of VEGF-A to heparin-coated surfaces upon which ECs showed protein-dependent proliferation. Also, ECs cultured on heparin-coated glass surfaces exhibited effects upon focal contacts. Heparinized islets combined with VEGF-A demonstrated unaffected insulin release. Further, covering islets with heparin also increased the adhesion of ECs to the islet surface. Immobilized heparin on the islet surface may be a useful anchor molecule for achieving complete coverage of islets with angiogenic growth factors, ultimately improving islet revascularization and engraftment in pancreatic islet transplantation.

L10 ANSWER 2 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2010262116 MEDLINE
DOCUMENT NUMBER: PubMed ID: 20119897
TITLE: Resolvin E1 reduces proinflammatory markers in human pancreatic islets in vitro.
AUTHOR: Lund T; Mangsbo S M; Scholz H; Gjorstrup P; Totterman T H; Korsgren O; Foss A
CORPORATE SOURCE: Division of Surgery, Section for Transplantation, Oslo University Hospital, Oslo, Norway.
tormod.lund@rr-research.no
SOURCE: Experimental and clinical endocrinology & diabetes : official journal, German Society of Endocrinology [and] German Diabetes Association, (2010 Apr) Vol. 118, No. 4, pp. 237-44. Electronic Publication: 2010-01-29.
Journal code: 9505926. E-ISSN: 1439-3646. L-ISSN: 0947-7349.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 201007
ENTRY DATE: Entered STN: 16 Apr 2010

Last Updated on STN: 10 Jul 2010
Entered Medline: 9 Jul 2010

AB BACKGROUND: In clinical islet transplantation, inflammatory responses initiated by the transplanted islets and by the host immune system cause acute and chronic graft loss. The resolution of acute inflammation is an active process mediated by specific signals and mediators such as resolvin E1 (RvE1). We investigated the effect of RvE1 on i) the inflammatory status of human pancreatic islets, ii) islet viability and apoptosis, and iii) the instant blood-mediated inflammatory reaction (IBMIR) IN VITRO.

METHODS: Pro-inflammatory cytokines and tissue factor (TF) in isolated human islets were determined by real-time RT-qPCR (mRNA levels), CBA and Gyrolab bioaffy (protein levels) after lipopolysaccaride (LPS) stimulation. Islet viability was measured using insulin secretion in a dynamic model, ADP/ATP ratio and total ATP content. Apoptosis was measured using commercial kits after stimulation with proinflammatory cytokines. To assess effect on IBMIR, human islets were mixed with non-anticoagulated, RvE1 or vehicle pretreated ABO-compatible blood in heparin-coated tubing loops.

RESULTS: Treatment of human islets with RvE1 (500 nM) for 24 h reduced LPS-induced increase in mRNA and protein levels of selected pro-inflammatory markers (IL-8, MCP-1, and TF). RvE1 lowered the ADP/ATP ratio, but had no effect on insulin secretion. RvE1 reduced the apoptotic effect of proinflammatory cytokines. Additionally, RvE1 reduced platelet consumption and TAT complex formation during the first 5 min after islet-blood contact.

CONCLUSIONS: RvE1 suppresses proinflammatory markers and lowers the ADP/ATP ratio in human islets IN VITRO. RvE1 demonstrates anti-apoptotic effects in a proinflammatory milieu. Additionally, RvE1 has modest dampening effects on IBMIR. We conclude that RvE1 may have potential in clinical islet transplantation.

L10 ANSWER 3 OF 12 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER:	2009613293 MEDLINE
DOCUMENT NUMBER:	PubMed ID: 19741458
TITLE:	Surface modification of islets with PEG-lipid for improvement of graft survival in intraportal transplantation.
AUTHOR:	Teramura Yuji; Iwata Hiroo
CORPORATE SOURCE:	Department of Nano-Medicine Merger Education Unit, Graduate School of Engineering, Kyoto University, Kyoto, Japan. teramura@frontier.kyoto-u.ac.jp
SOURCE:	Transplantation, (2009 Sep 15) Vol. 88, No. 5, pp. 624-30. Journal code: 0132144. E-ISSN: 1534-6080. L-ISSN: 0041-1337.
PUB. COUNTRY:	United States
DOCUMENT TYPE:	Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE:	English
FILE SEGMENT:	Priority Journals
ENTRY MONTH:	200909
ENTRY DATE:	Entered STN: 11 Sep 2009 Last Updated on STN: 29 Sep 2009 Entered Medline: 28 Sep 2009

AB BACKGROUND: Transplantation of islets of Langerhans (islets) is a promising technique for treating insulin-dependent diabetes mellitus (type I). One unsolved issue is the early graft loss due to inflammatory reactions triggered by blood coagulation and complement activation that occurs immediately after

transplantation into the liver through the portal vein. Several proposed approaches for improvement of the graft survival include heparin coating and covalent poly(ethylene glycol) (PEG) conjugation. We previously have studied the improvement of graft survival by modification of islet surfaces using amphiphilic PEG-conjugated phospholipid and bioactive molecules. Here, we analyzed the effect of PEG-modification on the improvement of graft survival immediately after intraportal transplantation into streptozotocin-induced diabetic mice.

METHODS: The surface of hamster islets was modified with PEG-lipid. PEG-lipid modified islets (PEG-islets) were transplanted into the liver through the portal vein of streptozotocin-induced diabetic mice. We measured the graft survival periods and blood insulin levels immediately after intraportal transplantation to determine the cell damage to islets. Histocytochemical analyses of liver were also performed postintraportal transplantation.

RESULTS: The graft survival of PEG-islets was significantly prolonged compared with bare islets in livers of diabetic mice. Reduction of blood insulin level within 60 min after transplantation of PEG-islets suggests that the cell damage observed immediately after transplantation could be suppressed by surface modification with PEG in comparison with bare islets.

CONCLUSION: Our approach for the improvement of graft survival will be useful in the clinical setting.

L10 ANSWER 4 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2009467649 MEDLINE
DOCUMENT NUMBER: PubMed ID: 19579813
TITLE: Isolation, banking, encapsulation and transplantation of different types of Langerhans islets.
AUTHOR: Antosiak-Iwanska Magdalena; Sitarek Elzbieta; Sabat Marek; Godlewska Ewa; Kinasiewicz Joanna; Werynski Andrzej
CORPORATE SOURCE: Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warszawa, Poland. magdalena.antosiak@ibib.waw.pl
SOURCE: Polskie Archiwum Medycyny Wewnetrznej, (2009 May) Vol. 119, No. 5, pp. 311-7.
Journal code: 0401225. ISSN: 0032-3772. L-ISSN: 0032-3772.
PUB. COUNTRY: Poland
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200909
ENTRY DATE: Entered STN: 8 Jul 2009
Last Updated on STN: 5 Sep 2009
Entered Medline: 4 Sep 2009

AB INTRODUCTION: The discovery of a cure for diabetes is a dream of many medical researchers. The transplantation of Langerhans islets is a potential treatment of choice for patients with type 1 diabetes as a source of endogenous insulin for the recipient.

OBJECTIVES: The aim of the experiment was to transplant Langerhans islets without immunosuppression. To protect the grafts against transplant rejection, semipermeable membranes could be used.

MATERIAL AND METHODS: Langerhans islets were isolated from rats and pigs and immunoisolated by encapsulation in alginate-protamine-heparin (APH) or alginate-poly-L-lysine-alginate (APA) membranes. Islets were pooled in a controlled manner. Tests for cryopreservation and

biocompatibility were also performed.

RESULTS: The capsules coated with APH are more resistant than the capsules coated with APA. After transplantation of the islets immunoisolated with APA, euglycemia is maintained longer than after transplantation of the islets immunoisolated with APH. Microencapsulation protects the islets from destruction by the host.

CONCLUSIONS: It is feasible to treat experimental diabetes by transplantation of encapsulated Langerhans islets without immunosuppression.

L10 ANSWER 5 OF 12 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2008454799 MEDLINE
DOCUMENT NUMBER: PubMed ID: 18533707
TITLE: Islets surface modification prevents blood-mediated inflammatory responses.
AUTHOR: Teramura Yuji; Iwata Hiroo
CORPORATE SOURCE: Department of Nano-Medicine Merger Education Unit, Graduate School of Engineering, Kyoto University, and Institute for Frontier Medical Sciences, Kyoto University, 53 Kawara-cho, Shogoin, Sakyo-ku, Kyoto, 606-8507, Japan.
SOURCE: Bioconjugate chemistry, (2008 Jul) Vol. 19, No. 7, pp. 1389-95. Electronic Publication: 2008-06-06. Journal code: 9010319. E-ISSN: 1520-4812. L-ISSN: 1043-1802.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200809
ENTRY DATE: Entered STN: 18 Jul 2008
Last Updated on STN: 16 Sep 2008
Entered Medline: 15 Sep 2008

AB Transplantation of islets of Langerhans (islets) is a promising technique for treating insulin-dependent diabetes mellitus (type I). One unresolved issue is early graft loss due to inflammation triggered by blood coagulating on the surface of islets after transplantation into the portal vein. Here, we describe a versatile method for modifying the surface of islets with an ultrathin membrane carrying the fibrinolytic enzyme urokinase or the anticoagulant heparin. The surface of islets was modified with a poly(ethylene glycol)--phospholipid conjugate bearing a biotin group (biotin-PEG-lipids, PEG MW: 5000). Biotin-PEG-lipids were anchored to the cell membranes of islets, and the PEG-lipid layer on the islets was further covered by streptavidin and biotin-bovine serum albumin conjugate using a layer-by-layer method. The surface was further activated with oxidized dextran. Urokinase was anchored to the islets through Schiff base formation. Heparin was anchored to the islets through polyion complex formation between anionic heparin and a cationic protamine coating on the islets. No practical islet volume increase was observed after surface modification, and the modifications did not impair insulin release in response to glucose stimulation. The anchored urokinase retained high fibrinolytic activity, which could help to improve graft survival by preventing thrombosis on the islet surface.

L10 ANSWER 6 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2007440436 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17540953
TITLE: Islet surface heparinization prevents the instant blood-mediated inflammatory reaction in islet

transplantation.
AUTHOR: Cabric Sanja; Sanchez Javier; Lundgren Torbjorn; Foss Aksel; Felldin Marie; Kallen Ragnar; Salmela Kaija; Tibell Annika; Tufveson Gunnar; Larsson Rolf; Korsgren Olle; Nilsson Bo
CORPORATE SOURCE: Division of Clinical Immunology, Department of Oncology, Radiology, and Clinical Immunology, The Rudbeck Laboratory, Uppsala University, Uppsala, Sweden.
SOURCE: Diabetes, (2007 Aug) Vol. 56, No. 8, pp. 2008-15. Electronic Publication: 2007-05-31. Journal code: 0372763. E-ISSN: 1939-327X. L-ISSN: 0012-1797.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, N.I.H., EXTRAMURAL) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200708
ENTRY DATE: Entered STN: 31 Jul 2007
Last Updated on STN: 16 Aug 2007
Entered Medline: 15 Aug 2007
OS.CITING REF COUNT: 3 There are 3 MEDLINE records that cite this record
AB OBJECTIVE: In clinical islet transplantation, the instant blood-mediated inflammatory reaction (IBMIR) is a major factor contributing to the poor initial engraftment of the islets. This reaction is triggered by tissue factor and monocyte chemoattractant protein (MCP)-1, expressed by the transplanted pancreatic islets when the islets come in contact with blood in the portal vein. All currently identified systemic inhibitors of the IBMIR are associated with a significantly increased risk of bleeding or other side effects. To avoid systemic treatment, the aim of the present study was to render the islet graft blood biocompatible by applying a continuous heparin coating to the islet surface.

RESEARCH DESIGN AND METHODS: A biotin/avidin technique was used to conjugate preformed heparin complexes to the surface of pancreatic islets. This endothelial-like coating was achieved by conjugating barely 40 IU heparin per full-size clinical islet transplant.

RESULTS: Both in an in vitro loop model and in an allogeneic porcine model of clinical islet transplantation, this heparin coating provided protection against the IBMIR. Culturing heparinized islets for 24 h did not affect insulin release after glucose challenge, and heparin-coated islets cured diabetic mice in a manner similar to untreated islets.

CONCLUSIONS: This novel pretreatment procedure prevents intraportal thrombosis and efficiently inhibits the IBMIR without increasing the bleeding risk and, unlike other pretreatment procedures (e.g., gene therapy), without inducing acute or chronic toxicity in the islets.

L10 ANSWER 7 OF 12 BIOSIS COPYRIGHT (c) 2011 The Thomson Corporation on STN
ACCESSION NUMBER: 2008:71830 BIOSIS
DOCUMENT NUMBER: PREV200800077284
TITLE: A new method for incorporation of functional heparin onto the surface of islets of Langerhans.
AUTHOR(S): Cabric, Sanja [Reprint Author]; Eich, Torsten; Sanchez, Javier; Nilsson, Bo; Korsgren, Olle; Larsson, Rolf
CORPORATE SOURCE: Uppsala Univ, Dept Oncol Radiol and Clin Immunol, Rudbeck Lab, Uppsala, Sweden

SOURCE: Xenotransplantation, (SEP 2007) Vol. 14, No. 5, pp. 462. Meeting Info.: Joint Meeting of the International-Xenotransplantation-Association/International-Pancreas-and-Islet-Transplant-Association/Cell-Transplant-Society. Minneapolis, MN, USA. September 15 -20, 2007. Int Xenotransplantat Assoc; Int Pancreas & Islet Transplant Assoc; Cell Transplant Soc. ISSN: 0908-665X.
DOCUMENT TYPE: Conference; (Meeting) Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Jan 2008 Last Updated on STN: 16 Jan 2008

L10 ANSWER 8 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2002742200 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12504401
TITLE: Production of tissue factor by pancreatic islet cells as a trigger of detrimental thrombotic reactions in clinical islet transplantation.
AUTHOR: Moberg L; Johansson H; Lukinius A; Berne C; Foss A; Kallen R; Ostraat O; Salmela K; Tibell A; Tufveson G; Elgue G; Nilsson Ekdahl K; Korsgren O; Nilsson B
CORPORATE SOURCE: Department of Radiology, Oncology, and Clinical Immunology, Division of Clinical Immunology, Rudbeck Laboratory, Uppsala, Sweden.
SOURCE: Lancet, (Dec 21-28 2002) Vol. 360, No. 9350, pp. 2039-45. Journal code: 2985213R. ISSN: 0140-6736. L-ISSN: 0140-6736.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 31 Dec 2002 Last Updated on STN: 8 Jan 2003 Entered Medline: 7 Jan 2003
OS.CITING REF COUNT: 13 There are 13 MEDLINE records that cite this record
AB BACKGROUND: Intraportal transplantation of pancreatic islets offers improved glycaemic control and insulin independence in type 1 diabetes mellitus, but intraportal thrombosis remains a possible complication. The thrombotic reaction may explain why graft loss occurs and islets from more than one donor are needed, since contact between human islets and ABO-compatible blood in vitro triggers a thrombotic reaction that damages the islets. We investigated the possible mechanism and treatment of such thrombotic reactions.

METHODS: Coagulation activation and islet damage were monitored in four patients undergoing clinical islet transplantation according to a modified Edmonton protocol. Expression of tissue factor (TF) in the islet preparations was investigated by immunohistochemistry, immunoprecipitation, electron microscopy, and RT-PCR. To assess TF activity in purified islets, human islets were mixed with non-anticoagulated ABO-compatible blood in tubing loops coated with heparin.

FINDINGS: Coagulation activation and subsequent release of insulin were found consistently after clinical islet transplantation, even in the absence of signs of intraportal thrombosis. The endocrine, but not the exocrine, cells of the pancreas were found to synthesise and secrete active TF. The clotting reaction triggered by pancreatic islets in vitro could be abrogated by blocking the active site of TF with specific

antibodies or site-inactivated factor VIIa, a candidate drug for inhibition of TF activity in vivo.

INTERPRETATION: Blockade of TF represents a new therapeutic approach that might increase the success of islet transplantation in patients with type 1 diabetes, in terms of both the risk of intraportal thrombosis and the need for islets from more than one donor.

L10 ANSWER 9 OF 12 MEDLINE on STN
ACCESSION NUMBER: 2002024631 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11478332
TITLE: Towards retrievable vascularized bioartificial pancreas: induction and long-lasting stability of polymeric mesh implant vascularized with the help of acidic and basic fibroblast growth factors and hydrogel coating.
AUTHOR: Prokop A; Kozlov E; Nun Non S; Dikov M M; Sephel G C; Whitsitt J S; Davidson J M
CORPORATE SOURCE: Department of Chemical Engineering, Vanderbilt University School of Engineering, Nashville, Tennessee 37235, USA. ales.prokop@mcmail.vanderbilt.edu
CONTRACT NUMBER: P30 AR41943 (United States NIAMS NIH HHS)
SOURCE: Diabetes technology & therapeutics, (2001 Summer) Vol. 3, No. 2, pp. 245-61.
Journal code: 100889084. ISSN: 1520-9156. L-ISSN: 1520-9156.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 21 Jan 2002
Last Updated on STN: 21 Jan 2002
Entered Medline: 7 Dec 2001

AB We seek to improve existing methodologies for allogenic grafting of pancreatic islets. The lack of success of encapsulated transplanted islets inside the peritoneal cavity is presently attributed to poor vascularization of the implant. A thick, fibrotic capsule often surrounds the graft, limiting survival. We have tested the hypothesis that neovascularization of the graft material can be induced by the addition of proper angiogenic factors embedded within a polymeric coat. Biocompatible and nonresorbable meshes coated with hydrophilic polymers were implanted in rats and harvested after 1-, 6-, and 12-week intervals. The implant response was assessed by histological observations on the degree of vascularity, fibrosis, and inflammation. Macrostructural geometry of meshes was conducive to tissue ingrowth into the interstitial space between the mesh filaments. Hydrogel coating with incorporated acidic or basic FGF in an electrostatic complex with polyelectrolytes and/or with heparin provided a sustained slow release of the angiogenic growth factor. Anti-factor VIII and anti-collagen type IV antibodies and a GSL I-B4 lectin were used to measure the extent of vascularization. Vigorous and persistent vascularization radiated several hundred microns from the implant. The level of vascularization should provide a sufficient diffusion of nutrients and oxygen to implanted islets. Based on our observations, stable vascularization may require a sustained angiogenic signal to allow for the development of a permanent implant structure.

L10 ANSWER 10 OF 12 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1995184773 MEDLINE

DOCUMENT NUMBER: PubMed ID: 7879120
TITLE: Multilayer coating of islets of Langerhans: in vitro studies on a new method for immunoisolation.
AUTHOR: Tatarkiewicz K; Sitarek E; Sabat M; Orlowski T
CORPORATE SOURCE: Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences, Warsaw.
SOURCE: Transplantation proceedings, (1995 Feb) Vol. 27, No. 1, pp. 617.
Journal code: 0243532. ISSN: 0041-1345. L-ISSN: 0041-1345.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199504
ENTRY DATE: Entered STN: 19 Apr 1995
Last Updated on STN: 19 Apr 1995
Entered Medline: 5 Apr 1995

L10 ANSWER 11 OF 12 EMBASE COPYRIGHT (c) 2011 Elsevier B.V. All rights reserved on STN DUPLICATE 4
ACCESSION NUMBER: 1996039652 EMBASE
TITLE: A new method for microencapsulation of pancreatic islets - in vitro evaluation.
AUTHOR: Tatarkiewicz, K. (correspondence); Sitarek, E.; Sabat, M.; Orlowski, T.
CORPORATE SOURCE: Inst. of Biocybernet./Biomed. Engin., Polish Academy of Sciences, ul. Trojdena 4, 02-109 Warszawa, Poland.
SOURCE: Polish Journal of Immunology, (1995) Vol. 20, No. 4, pp. 394-396.
ISSN: 0324-8534 CODEN: PJIME4
COUNTRY: Poland
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
003 Endocrinology
LANGUAGE: English
SUMMARY LANGUAGE: English; Polish
ENTRY DATE: Entered STN: 5 Mar 1996
Last Updated on STN: 5 Mar 1996
AB A new modification of microencapsulation of islets of Langerhans was examined in vitro. This procedure, based on centrifugation in a density gradient, provides a thin coating (about 10 μm) for each single islet [6]. To improve biocompatibility the additional protamine-heparin membrane was applied. The presented technique did not impair encapsulated islets' viability compared to their free counterparts.

L10 ANSWER 12 OF 12 EMBASE COPYRIGHT (c) 2011 Elsevier B.V. All rights reserved on STN DUPLICATE 5
ACCESSION NUMBER: 1981137139 EMBASE
TITLE: An artificial endocrine pancreas containing cultured islets of Langerhans.
AUTHOR: Sun, A.; Parisius, W.; Macmorine, H.; et. al.
CORPORATE SOURCE: Connaught Res. Inst., Toronto, Canada.
SOURCE: Artificial Organs, (1980) Vol. 4, No. 4, pp. 275-278.
ISSN: 0160-564X CODEN: ARORD7
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 003 Endocrinology
009 Surgery
LANGUAGE: English

ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

AB This study was directed toward the development of an artificial endocrine pancreas. The device contains functioning Islets of Langerhans sequestered in a chamber equipped with an internal, looped semipermeable fiber which may be attached to a blood vessel. Our experiments showed that when the device was attached to diabetic monkeys by an arteriovenous shunt, the islets responded to increased levels of blood glucose by increased flow of insulin across the semipermeable barrier and that a normoglycemic state was attained. These findings are in agreement with those of others, and with our published data, but a major drawback to practical application of previously described devices is the necessity of preventing thrombi in the lumen of the fiber by a high dosage of circulating anticoagulants. We have addressed this problem and have developed a fiber which contains heparin covalently bonded to the lumen. The coating has been found to be irreversibly bound to the surface of the fiber. After attachment of the device, containing the modified fiber, to monkey blood vessels, function was maintained for as long as six days after which the anastomosis between the blood vessel and the fiber was found to have been occluded by a thrombus. The lumen remained patent. Further work is needed to resolve this problem but it would appear that the device has practical application in the treatment of the diabetic.

=> d his

(FILE 'HOME' ENTERED AT 14:31:19 ON 03 MAR 2011)

FILE 'REGISTRY' ENTERED AT 14:31:33 ON 03 MAR 2011
L1 64 S LANGERHANS
L2 58 S L1 AND ISLET
L3 58 S ISLET OF LANGERHANS
L4 1552 S HEPARIN

FILE 'CAPLUS' ENTERED AT 14:32:16 ON 03 MAR 2011
L5 4 S L3 AND L4
L6 4 DUP REM L5 (0 DUPLICATES REMOVED)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 14:32:55 ON 03 MAR 2011
L7 44982 S ISLET OF LANGERHANS
L8 135 S L7 AND HEPARIN
L9 20 S L8 AND COAT?
L10 12 DUP REM L9 (8 DUPLICATES REMOVED)

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---Logging off of STN---

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Executing the logoff script...

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	20.50	68.76

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	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-3.48

STN INTERNATIONAL LOGOFF AT 14:35:42 ON 03 MAR 2011